UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/761,950	01/17/2001	Francesco Natalini	108041-0012	6194

24267 7590 12/18/2003

CESARI AND MCKENNA, LLP
88 BLACK FALCON AVENUE
BOSTON, MA 02210

EXAMINER	
WEST, JEFFREY R	

ART UNIT	PAPER NUMBER
2857	

DATE MAILED: 12/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/761,950	Applicant(s) NATALINI ET AL.	
	Examiner Jeffrey R. West	Art Unit 2857	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 September 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-40* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-40* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11 August 2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: "903".

Specification

2. The abstract of the disclosure is objected to because it is longer than the 150 word limit. Correction is required. See MPEP § 608.01(b).

Claim Objections

3. Claim 6 is objected to because of the following informalities:

In claim 6, subsections "B" and "C" should be changed to "C" and "D" since claim 1 already contains subsection "B".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 25, 26, and 28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 25 and 26 are rejected as being vague and indefinite because they include the limitation for using "the results" without any previous mention of any "results". Therefore it is unclear to one having ordinary skill in the art to what results are being used.

Similarly, claim 28 is rejected as being vague and indefinite because it includes a limitation for determining "if the other appliances require service" without any previous mention of any "other appliances". Therefore it is unclear to one having ordinary skill in the art what differentiates the appliance from the "other appliances".

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1-3, 12-14, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,553,336 to Johnson in view of U.S. Patent No. 5,963,884 to Billington et al.

Johnson discloses a system for servicing a variety of devices, such as household appliances (column 25, lines 55-56 and column 26, lines 23-28), including one or more monitoring subsystems/adapters (column 12, lines 60-63) associated with the one or more devices (column 4, lines 44-48), each monitoring subsystem

continuously monitoring the operation of a given device (column 15, lines 14-16) and retaining as functional data information relating to the functioning of the device, analyzing the functional data and related historical and statistical data maintained by the monitoring subsystem and determining if the device is in need of attention (column 13, lines 50-62) to avoid a failure of the device (i.e. predict/prevent an alarm condition) (column 23, lines 13-19), and transmitting a message, over a network (abstract), indicating that the device requires attention, related functional data, and data aggregations/summaries to a center for receiving the messages sent by the monitoring subsystems located local to the device (column 13, line 59 to column 14, line 6 and column 14, lines 47-67). Johnson discloses that the center analyzing the respective messages and the received data and related functional, historical and statistical data maintained by the center and contacting one or more users of the associated device of the condition (column 15, lines 54-59 and column 16, lines 46-67).

As noted above, the invention of Johnson teaches many of the features of the claimed invention and while the invention of Johnson does teach indicating that an alarm condition (i.e. potential failure condition) is approaching (column 23, lines 13-20), Johnson does not specifically disclose informing the user of the particular attention required by the device to avoid failures or distinguishing between alarm conditions requiring immediate attention and warning conditions.

Billington teaches a predictive maintenance system including a plurality of remote data acquisition nodes connected to a central control computer for performing the

control and monitoring activities of a plurality of devices (column 3, lines 15-45) as well as a display for allowing the user to view monitoring results (column 3, line 65 to column 4, line 2). Billington also teaches user controlled commands for collecting, viewing, statistical trending, and analyzing obtained data (column 6, lines 43-47) in order to indicate the severity of any conditions (i.e. as a warning if attention is needed to avoid failure or an alarm if service is needed) as well as recommend specific actions for remedying the condition (column 7, lines 37-47).

It would have been obvious to one having ordinary skill in the art to modify the invention of Johnson to include informing the user of the particular attention required by the device to avoid failures distinguishing between alarm conditions requiring immediate attention and warning conditions, as taught by Billington, because the combination would have provided a method for correcting the possible problem thereby preventing its occurrence and costly repair and, as suggested by Billington, by including an explicit, color-coded display the combination would have provided a clear way for a rule-based system that presents simple instruction to allow both skilled and unskilled workers to correctly maintain the device (column 7, lines 48-51 and column 11, line 63 to column 12, line 23).

8. Claims 4 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson in view of Billington et al. and further in view of U.S. Patent No. 5,077,582 to Kravette.

As noted above, the invention of Johnson and Billington teaches all of the features of the claimed invention except for determining, if service is required, whether the user of the appliance has a service contract that covers the service and, if so, arranges service accordingly.

Kravette teaches a photocopy monitoring system that monitors a plurality of diagnostic signals and translates the diagnostic signals to a signal usable by a remote station (column 4, lines 50-55), wherein the remote station indicates that service is required and arranges service to performed by a maintenance specialist (column 9, lines 29-40) in accordance with a maintenance/service contract (column 4, line 66 to column 5, line 5).

It would have been obvious to one having ordinary skill in the art to modify the invention of Johnson and Billington to include determining, if service is required, whether the user of the appliance has a service contract that covers the service and, if so, arranges service accordingly, as taught by Kravette, because, as suggested by Kravette, the combination would have eliminated human error by automatically arranging service while adhering to correct billing information by keeping track of service required by a contract (column 4, line 66 to column 5, line 5 and column 9, lines 29-40).

9. Claims 5 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson in view of Billington and Kravette and further in view of U.S. Patent No. 4,977,394 to Manson.

As noted above, Johnson in combination with Billington and Kravette teaches many of the features of the claimed invention including providing service in accordance with a maintenance/service contract but does not specifically teach determining whether a user can perform the service or if a service person is required.

Manson teaches a diagnostic system for an automatic appliance comprising gathering and storing data during the operation of the automatic appliance so that upon malfunction of the appliance the data can be retrieved and analyzed to determine the cause of the malfunction (column 2, lines 49-53) as well as issuing a warning to the user that the appliance is undergoing an error and needs attention (column 13, lines 40-50). Manson then teaches that upon issuance of a warning determining whether the warning indicates an error that requires action by the user of the device, and correspondingly displays what error exists so that the user may correct the problem, or determines that a call should be placed to a skilled service person for the proper maintenance (column 16, lines 26-55).

It would have been obvious to one having ordinary skill in the art to modify the invention of Johnson, Billington, and Kravette to include determining whether a user can perform the service or if a service person is required, as taught by Manson, because the combination would have reduced costs by only calling a service worker when complicated service is required and, as suggested by Mason, the combination would have provided a method for determining service requirements of an apparatus that is usually controlled by unskilled users, who would need detailed service

information, rather than skilled workers who could easily correct the problem (column 2, lines 35-45).

10. Claims 6, 9, 17, 20, and 36-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson in view of Billington and further in view of U.S. Patent No. 6,236,332 to Conkright et al.

As noted above, the invention of Johnson and Billington teaches all of the features of the claimed invention except for including a polling gateway connected to the network to receive messages and determining the energy consumption of the associated appliances.

Conkright discloses a system for monitoring, controlling, and servicing a plurality of electrical apparatuses, such as lighting systems located at a plurality of households (column 1, lines 60-61), comprising one or more monitoring subsystems associated with each apparatus (column 5, line 66 to column 6, line 2) wherein each monitoring subsystem periodically determines if it needs to monitor its associated electrical apparatus (column 5, lines 42-49), and if so, obtains operating condition data, as well as energy consumption data (column 1, lines 31-41), of the electrical apparatus, analyzes the data to detect an alert condition, and, if an alert condition is determined, transmits over a wireless service gateway and corresponding network (column 3, lines 53-54 and 61-65) an alert notification signal to a central computer (column 5, lines 50-60) and further to a customer monitoring the device through installed subscriber software (column 3, lines 25-43).

Conkright also discloses transmitting alert messages when they are received (column 5, lines 58-60) or polling, at predetermined times, the monitoring subsystems by the central computer through the gateway (column 7, lines 55-60) to determine whether or not a fault condition requiring service exists (column 8, lines 18-27), and determining if the fault indicates a complete failure or a partial failure (column 8, lines 35-49). Conkright then discloses that if it is determined that one or more of the apparatuses requires service, the state of the particular component that requires service is determined and the action needed to fix the problem is sent to a service worker who corrects the fault condition according to a service contract between the user and supplier (column 9, lines 22-29 and 64-66). Conkright then discloses notifying the user that the fault has been corrected (column 10, lines 35-40).

It would have been obvious to one having ordinary skill in the art to modify the invention of Johnson and Billington to include a polling gateway connected to the network to receive messages and determining the energy consumption of the associated appliances, as taught by Conkright because, as suggested by Conkright, the combination would have provided a method for insuring accurate two-way communication between components (column 3, lines 44-65) and determining whether the devices being monitored are operating with high efficiency or if changes need to be made to reduce the cost/energy being used (column 1, lines 22-25).

With respect to claims 6 and 17, since the invention of Johnson and Billington distinguishes between critical and non-critical conditions and the invention of

Conkright teaches either sending messages immediately or polling for messages as predetermined times, it would have been obvious to one having ordinary skill in the art to specify that the critical conditions be indicated to the user immediately while non-critical conditions are polled at predetermined times, because one having ordinary skill in the art would recognize that critical conditions need to be remedied immediately, while non-critical conditions can be remedied at a later time, as is well-known in the art (see for example U.S. Patent No. 6,434,458 to Laguer-Diaz, column 5, lines 10-15).

With respect to claim 36, while the invention of Johnson, Billington, and Conkright teaches using the system and method for monitoring a plurality of different devices, it does not specifically distinguish between intelligent and non-intelligent devices. This feature, however, is considered to be an intended use recitation. It has been held that a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). In the instant case, the structure of Johnson, Billington, and Conkright would be able receive signals from both intelligent and non-intelligent appliances and further, one having ordinary skill in the art would be motivated to monitor both intelligent and non-intelligent devices to provide a universal device having a wider variety of applications.

11. Claims 7, 8, 18, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson in view of Billington and Conkright and further U.S. Patent Application Publication No. 2001/0032109 to Gonyea et al.

As noted above, Johnson in combination with Billington and Conkright teaches all of the features of the claimed invention except for determining if and when an appliance should be replaced based on statistical patterns of use and providing, according to a replacement contract, the delivering and installation of a replacement appliance that fits the pattern of use.

Gonyea teaches a system and method for predicting a maintenance schedule and costs for performing future service events of a product comprising inputting operating conditions of the product through a network to a server computer (0013) and based upon a comparison between the operating environment, operating conditions, and a pattern of use model (i.e. wear and tear on a part over time based on the operating conditions), over a period of time corresponding to the length of a service agreement (i.e. contract), and a predetermined limit that determines when a part should be replaced (0026 and 0027). Gonyea also teaches determining repair and replacement limits and providing new parts that remain within the determined usage limits (0050) by searching and maintaining an inventory (0055 and 0056) according to the conditions of a maintenance contract (0058).

It would have been obvious to one having ordinary skill in the art to modify the invention of Johnson, Billington, and Conkright to include determining if and when an

appliance should be replaced based on statistical patterns of use and providing, according to a replacement contract, the delivering and installation of a replacement appliance that fits the pattern of use, as taught by Gonyea, because the combination would have provided a replacement part that would last longer by withstanding the operating conditions, thereby reducing future costs, and, as suggested by Gonyea, provided a method that obtains maximum use of a component by using the component up to a failure limit but eliminates a potential failure by changing the part before exceeding the limit (0027).

12. Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson in view of Billington et al. further in view of EP Patent No. 0 725 181 A1 to Aisa et al.

As noted above, the invention of Johnson and Billington teaches all of the features of the claimed invention except for specifying that the monitoring include monitoring the settings of the appliances and the appliance's ambient environment.

Aisa teaches a method for managing the control of a household appliance (column 2, lines 26-30) by taking into account the settings presented by the user (column 7, lines 1-17) as well as the ambient environmental conditions/states in which the components of the appliance operate (column 5, lines 20-27) and uses the environmental data to form statistical/historical data (column 6, lines 28-35).

It would have been obvious to one having ordinary skill in the art to modify the invention of Johnson and Billington to include specifying that the monitoring include

monitoring the settings of the appliances and the appliance's ambient environment, as taught by Aisa, because, Aisa suggests that the combination would manage the household appliance in such a way as to obtain the maximum global performance in relation to a determined functional condition thereby not only monitoring the mechanical condition of the appliance but also the correct operating condition of the appliance to insure that it is meeting its desired purpose (column 3, lines 32-47).

13. Claim 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson in view of Billington and Conkright and further in view of EP Patent No. 0 725 181 A1 to Aisa et al.

As noted above, Johnson in combination with Billington and Conkright teaches all of the features of the claimed invention except for specifying that the monitoring include monitoring the settings of the appliances and the appliance's ambient environment.

Aisa teaches a method for managing the control of a household appliance (column 2, lines 26-30) by taking into account the settings presented by the user (column 7, lines 1-17) as well as the ambient environmental conditions in which the components of the appliance operate (column 5, lines 20-27) and uses the environmental data to form statistical/historical data (column 6, lines 28-35).

It would have been obvious to one having ordinary skill in the art to modify the invention of Johnson, Billington, and Conkright to include specifying that the monitoring include monitoring the settings of the appliances and the appliance's

ambient environment, as taught by Aisa, because Aisa suggests that the combination would manage the household appliance in such a way as to obtain the maximum global performance in relation to a determined functional condition thereby not only monitoring the mechanical condition of the appliance but also the correct operating condition of the appliance to insure that it is meeting its desired purpose (column 3, lines 32-47).

14. Claims 25 and 26, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson in view of Billington and Aisa and further in view of U.S. Patent No. 6,434,458 to Laguer-Diaz et al.

As noted above, Johnson in combination with Billington and Aisa teaches all of the features of the claimed invention except for analyzing data from a given appliance in accordance with operating data from other appliances of the same type to determine if the given appliance requires service to avoid a failure.

Laguer-Diaz teaches a well-known system for analyzing data patterns or fault occurrences with respect to the operation of other similar devices under monitoring in order to determine if preventive maintenance is needed on a current device under monitoring (column 2, lines 11-16). Laguer-Diaz also teaches discriminating between critical or non-critical faults and sending critical fault indications immediately while retaining non-critical fault indications (column 5, lines 10-15).

It would have been obvious to one having ordinary skill in the art to modify the invention of Johnson, Billington, and Aisa to include analyzing data from a given

appliance in accordance with operating data from other appliances of the same type to determine if the given appliance requires service to avoid a failure, as taught by Laguer-Diaz, because, as suggested by Laguer-Diaz, the combination would have prevented the occurrence of a line-of-service breakdown (column 2, lines 11-16) since a fault in one device will more than likely occur in another similar device undergoing the same wear/usage.

15. Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson in view of Billington et al. and further in view of U.S. Patent No. 6,498,611 to Beard et al.

As noted above, the invention of Johnson and Billington teaches all of the features of the claimed invention except for including a message header wherein at least one bit is set to one value to indicate alarm messages and set to another to indicate warning messages.

Beard teaches a system and method for providing a virtual operator panel for a peripheral device comprising a central computer in communication with a plurality of devices (column 8, lines 34-47) wherein communication is performed through messages including a header (column 10, lines 21-35 and column 13, "Printer Response" table) comprising at least one bit set to one value to indicate alarm messages, indicating that proper operation cannot be performed, and set to another to indicate warning messages (column 11, lines 9-24).

It would have been obvious to one having ordinary skill in the art to modify the invention of Johnson and Billington to include a message header wherein at least one bit is set to one value to indicate alarm messages and set to another to indicate warning messages, as taught by Beard, because, as suggested by Beard, the combination would have provided a method for quickly indicating and determining the type of message, thereby reducing diagnostic time and burden by the host computer/monitoring device (column 11, lines 3-9).

16. Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson in view of Billington et al. and further in view of U.S. Patent Application Publication No. 2002/0042830 to Bose et al.

As noted above, the invention of Johnson and Billington teaches all of the features of the claimed invention except for associating flags with the messages, checking the flags to determine if a message has already been sent and, if not, sending the message.

Bose teaches a system, method, and applications for real-time messaging over http-based protocols comprising sending information between a plurality of components (0067) using messages that include identifiers (i.e. flags) that indicate whether the message as been sent and if it is determined that it has not been sent, sending the message (0080).

It would have been obvious to one having ordinary skill in the art to modify the invention of Johnson and Billington to include associating flags with the messages,

checking the flags to determine if a message has already been sent and, if not, sending the message, as taught by Bose, because, as suggested by Bose, the combination would have prevented a device from incorrectly performing the same operation twice by insuring that a particular message is only sent once (0080).

17. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson in view of Billington et al. and further in view of U.S. Patent No. 5,452,234 to Heath et al.

As noted above, the invention of Johnson and Billington teaches all of the features of the claimed invention except for setting an alarm when user attention is required and transmitting a message indicating that the appliance requires attention if the user does not attend to the appliance within a predetermined time of setting the alarm.

Heath teaches a process environment monitoring system including a local alarm indicator in the process environment and a remote alarm indicator remote from the process environment (column 2, lines 8-11) wherein the first alarm is set when user attention is required and a message is sent to set the second remote alarm if the user does not attend to the monitored device within a predetermined time (column 6, lines 51-67).

It would have been obvious to one having ordinary skill in the art to modify the invention of Johnson and Billington to include setting an alarm when user attention is required and transmitting a message indicating that the appliance requires attention

if the user does not attend to the appliance within a predetermined time of setting the alarm, as taught by Heath, because, as suggested by Heath, the combination would have provided a two-tiered system allowing the user to have sufficient time to fix a small problem, without requiring the time burden or cost of calling someone remote from the device, while still providing a fail-safe system for cases when a local user is not present (column 6, lines 58-61).

18. Claims 28, 30, and 31, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson in view of Billington and Heath and further in view of U.S. Patent No. 6,434,458 to Laguer-Diaz et al.

As noted above, the invention of Johnson and Billington teaches all of the features of the claimed invention except for analyzing data from an appliance to determine if service is required in a plurality of other appliances.

Laguer-Diaz teaches a well-known system for analyzing fault occurrences in operating data of other similar devices under monitoring in order to determine if preventive maintenance is needed on a current device under monitoring (column 2, lines 11-16). Laguer-Diaz also teaches discriminating between critical or non-critical faults and sending critical fault indications immediately while retaining non-critical fault indications (column 5, lines 10-15).

It would have been obvious to one having ordinary skill in the art to modify the invention of Johnson and Billington to include analyzing data from an appliance to determine if service is required in a plurality of other appliances, as taught by

Laguer-Diaz, because, as suggested by Laguer-Diaz, the combination would have prevented the occurrence of a line-of-service breakdown (column 2, lines 11-16) since a fault in one device will more than likely occur in another similar device undergoing the same wear/usage.

19. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson in view of Billington, Heath, and Laguer-Diaz and further in view of EP Patent No. 0 725 181 A1 to Aisa et al.

As noted above, Johnson in combination with Billington, Heath, and Laguer-Diaz teaches all of the features of the claimed invention except for specifying that the monitoring include monitoring the settings of the appliances and appliance's ambient environment.

Aisa teaches a method for managing the control of a household appliance (column 2, lines 26-30) by taking into account the settings presented by the user (column 7, lines 1-17) as well as the ambient environmental conditions in which the components of the appliance operate (column 5, lines 20-27) and uses the environmental data to form statistical/historical data (column 6, lines 28-35).

It would have been obvious to one having ordinary skill in the art to modify the invention of Johnson, Billington, Heath, and Laguer-Diaz to include specifying that the monitoring include monitoring the settings of the appliances and appliance's ambient environment, as taught by Aisa, because Aisa suggests that the combination would manage the household appliance in such a way as to obtain the

maximum global performance in relation to a determined functional condition thereby not only monitoring the mechanical condition of the appliance but also the correct operating condition of the appliance to insure that it is meeting its desired purpose (column 3, lines 32-47).

20. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson in view of Billington et al., Heath, and Laguer-Diaz and further in view of U.S. Patent No. 5,077,582 to Kravette.

As noted above, Johnson in combination with Billington, Heath, and Laguer-Diaz teaches all the features of the claimed invention except for determining, if service is required, whether the user of the appliance has a service contract that covers the service and, if so, arranges service accordingly.

Kravette teaches a photocopy monitoring system that monitors a plurality of diagnostic signals and translates the diagnostic signals to a signal usable by a remote station (column 4, lines 50-55), wherein the remote station indicates that service is required and arranges service to performed by a maintenance specialist (column 9, lines 29-40) in accordance with a maintenance/service contract (column 4, line 66 to column 5, line 5).

It would have been obvious to one having ordinary skill in the art to modify the invention of Johnson, Billington, Heath, and Laguer-Diaz to include determining, if service is required, whether the user of the appliance has a service contract that covers the service and, if so, arranges service accordingly, as taught by Kravette,

because, as suggested by Kravette, the combination would have eliminated human error by automatically arranging service while adhering to correct billing information by keeping track of service required by a contract (column 4, line 66 to column 5, line 5 and column 9, lines 29-40).

21. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson in view of Billington et al. and Heath and further in view of U.S. Patent No. 5,924,486 to Ehlers et al.

As noted above, Johnson in combination with Billington and Heath teaches all of the features of the claimed invention except for further analyzing the operating data to determine and indicate if the given appliance is not being used efficiently.

Ehlers teaches an environmental condition control and energy management system and method comprising receiving a variety of operating data (column 9, lines 11-17), using the data to calculate the efficiency of each monitored appliance (column 21, lines 26-32), and processing the data to indicate to the user that the appliance needs maintenance to restore the device to its desired efficiency (column 12, lines 29-45).

It would have been obvious to one having ordinary skill in the art to modify the invention of Johnson, Billington, and Heath to include analyzing the operating data to determine and indicate if the given appliance is not being used efficiently, as taught by Ehlers, because, as suggested by Ehlers, the combination would have allowed the user to maintain the appliance operating at maximum efficiency in order to

minimize energy consumption therefore minimizing the amount spent on energy (column 2, lines 33-37).

22. Claim 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson in view of Billington et al. and Conkright and further in view of U.S. Patent No. 6,498,611 to Beard et al.

As noted above, Johnson in combination with Billington and Conkright teaches all of the features of the claimed invention except for including a message header wherein at least one bit is set to one value to indicate alarm messages and set to another to indicate warning messages.

Beard teaches a system and method for providing a virtual operator panel for a peripheral device comprising a central computer in communication with a plurality of devices (column 8, lines 34-47) wherein communication is performed through messages including a header (column 10, lines 21-35 and column 13, "Printer Response" table) comprising at least one bit set to one value to indicate alarm messages, indicating that proper operation cannot be performed, and set to another to indicate warning messages (column 11, lines 9-24).

It would have been obvious to one having ordinary skill in the art to modify the invention of Johnson, Billington, and Conkright to include a message header wherein at least one bit is set to one value to indicate alarm messages and set to another to indicate warning messages, as taught by Beard, because, as suggested by Beard, the combination would have provided a method for quickly indicating and

determining the type of message, thereby reducing diagnostic time and burden by the host computer/monitoring device (column 11, lines 3-9).

23. Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson in view of Billington et al. and Conkright and further in view of U.S. Patent Application Publication No. 2002/0042830 to Bose et al.

As noted above, Johnson in combination with Billington and Conkright teaches all of the features of the claimed invention except for associating flags with the messages, checking the flags to determine if a message has already been sent and, if not, sending the message.

Bose teaches a system, method, and applications for real-time messaging over http-based protocols comprising sending information between a plurality of components (0067) using messages that include identifiers (i.e. flags) that indicate whether the message as been sent and if it is determined that it has not been sent, sending the message (0080).

It would have been obvious to one having ordinary skill in the art to modify the invention of Johnson, Billington, and Conkright to include associating flags with the messages, checking the flags to determine if a message has already been sent and, if not, sending the message, as taught by Bose, because, as suggested by Bose, the combination would have prevented a device from incorrectly performing the same operation twice by insuring that a particular message is only sent once (0080).

Response to Arguments

24. Applicant's arguments with respect to claims 1-40 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

25. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

U.S. Patent No. 6,556,956 to Hunt teaches a data acquisition unit for a remote monitoring system and method for remote monitoring including a local processing system and a remote processing system.

U.S. Patent No. 6,504,482 to Mori et al. teaches an abnormality detection apparatus and method including a first alarm device and a second alarm device wherein the second alarm device is activated upon the detection of the first alarm for a predetermined period of time.

U.S. Patent Application Publication No. 2003/0109938 to Daum et al. teaches an internet enabled appliance command structure.

U.S. Patent No. 6,219,717 to Filkovsky et al. teaches a method and apparatus for implementing object transparent invocation including a messaging mechanism that adds a status indicator (i.e. flag) to the message once a message has been sent.

UK Patent Application No. 2 301 000 to Haseldine et al. teaches a communication system with total or individual paging facility including message transmission wherein the messages comprise a header including an alarm bit.

26. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey R. West whose telephone number is (703)308-1309. The examiner can normally be reached on Monday through Friday, 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc S. Hoff can be reached on (703)308-1677. The fax phone numbers for the organization where this application or proceeding is assigned are (703)308-7382 for regular communications and (703)308-7382 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

jrw
December 14, 2003

MARC S. HOFF
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800